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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF : Gerald T. Mearini and Laszlo Takacs
FOR : HIGH THROUGHPUT HIGH-YIELD
VACUUM DEPOSITION SYSTEM FOR THIN
FILM BASED DENSE WAVELENGTH
DIVISION MULTIPLEXERS
SERIAL NO. : 09/902,250
FILED : July 10, 2001
LAST OFFICE ACTION : Unknown
EXAMINER : Unknown
GROUP ART UNIT : 2874
ATTORNEY DOCKET NO. : 0937.0016
Akron, OH 44308-1136
October 12, 2001

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CERTIFICATE OF MAILING

I hereby certify that this INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.56 and §1.97 is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, DC 20231, on this 12 day of October, 2001.

By: Janet E. Sigler
Janet E. Sigler

Commissioner of Patents
and Trademarks
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.56 and §1.97

Dear Sir:

In accordance with 37 C.F.R. § 1.56 the applicant files this Information Disclosure Statement (IDS) under at least one of the following five circumstances:

1. **No Information to disclose:** applicant has no information to disclose at this time.

2. _____ **Under § 1.97(i):** this IDS is filed with the knowledge that it will NOT be considered.
- this IDS is filed BEFORE the grant of a patent; AND
 - this IDS does NOT comply with the requirements noted below
 - applicant notes that the information disclosed herein WILL be placed in the file
3. X **Under § 1.97(b):** this IDS should be considered because it is being filed
- within 3 months of the filing date of a national application OR
 - within 3 months of the date of entry of the national stage of an international appl. OR
 - before the mailing date of a first Office Action on the merits, whichever occurs last.
4. _____ **Under § 1.97(c):** this IDS should be considered because it is being filed
- after the period specified Under § 1.97(b) above but BEFORE either
 - the mailing date of a final action under § 1.113 OR
 - the mailing date of a notice of allowance under § 1.311, whichever occurs last,
 - AND is accompanied by either:

A) _____ one of the following statements under § 1.97(e):

I, Daniel A. Thomson, the undersigned hereby state:

(1) _____ Each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement, OR

(2) _____ To the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in this statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than 3 months prior to the filing of this statement; OR

B) _____ A check in the amount of \$ 240.00 is enclosed to cover the Information Disclosure Statement (IDS) Fee under 37 C.F.R. § 1.17(p) as required when neither item (1) nor (2) above are selected.

5. _____ **Under § 1.97(d):** this IDS should be considered because it is being filed
- after the period specified Under § 1.97(c) above but
 - ON OR BEFORE payment of the issue fee,
 - and is accompanied by:

A) _____ one of the following statements under § 1.97(e):

I, Daniel A. Thomson, the undersigned hereby state:

(1) _____ Each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement, OR

(2) _____ To the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in this statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than 3 months prior to the filing of this statement; AND

B) _____ a petition requesting consideration of the IDS; AND

C) _____ A check in the amount of \$ 130.00 is enclosed for the petition fee as set forth under 37 C.F.R. § 1.17(i).

In accordance with § 1.56 and § 1.97 the references listed below and on the attached form PTO-1449 are being brought to the attention of the Examiner for consideration in connection with the examination of the above-identified patent application. Copies of these cited documents are enclosed.

English-Language Documents

| Patentee | Patent No. | Issue Date |
|----------------|------------|---------------|
| Pan, et al | 5,748,350 | May 5, 1998 |
| Cao | 6,205,270 | Mar. 20, 2001 |
| Debley et al. | 5,529,671 | Jun. 25, 1996 |
| Malshe, et al. | 5,725,413 | Mar. 10, 1998 |
| Sharp | 4,747,922 | May 31, 1988 |
| Mesh, et al. | 6,233,261 | May 15, 2001 |

Foreign Patent Documents in English

| Country | Patent No. | Issue Date |
|---------|------------|------------|
|---------|------------|------------|

Foreign-Language Documents

| Country | Patent No. | Issue Date |
|---------|------------|------------|
|---------|------------|------------|

Other Documents

Kumar, et al.; *Near-Infrared Bandpass Filter from Si/SiO₂*; Multilayer Coatings; February 1999

Suntola, T.; *Cost-Effective Processing by Atomic Layer Epitaxy*; 1993.

Bachman, et al.; *Molecular Layer Epitaxy by Real-Time Optical Process Monitoring*; 1997.

H., Kawai, T. Tabata; *Atomic Layer Control of the Growth of Oxide Superconductors Using Laser Molecular Beam Epitaxy*; 1993

Imai, F., Kunimori, K., and Nozoye, H; *Novel Epitaxial Growth Mechanism of Magnesium Oxide/Titanium Oxide Ceramics Superlattice Thin Films Observed by Reflection High-Energy Electron Diffraction*; November 8, 1993.

Kildemo, et al.; *Real Time Control of the Growth of Silicon Alloy Multilayers by Multiwavelength Ellipsometry*; 1996.

Spiller, E; *Smoothing of Multilayer X-Ray Mirrors by Ion Polishing*; March 30, 1989.

Puik, E.J, van der Wiel and Zeijlemaker, H, and Verhoeven, J.; *Ion Etching of Thin W Layers: Enhancing Reflectivity of W-C Multilayer Coatings*; 1991.

Nishizawa, J., Abe, H., and Kurabayshi, T.J. *Electrochem.Soc.* 132(5) (1985).

Puik, E.J., et al.; *Appln. Surf. Sci.* 47 (1991) 251.


Kloidt, A, et al.; *Thin Sol Films*, 228 (1993) 154.

☒ Please charge deposit account No. 05-0875 if any additional fees are required.

It is respectfully requested that the Examiner indicate consideration of the cited references by returning a copy of the attached form PTO-1449 with initials or other appropriate marks.

Respectfully submitted,

EMERSON & SKERIOTIS



Daniel A. Thomson, Esq.
Reg. No. 43,189
One Cascade Plaza - Fourteenth Floor
Akron, OH 443308-1136
(330) 535-9999

October 12, 2001
Date

(Rev. 2-32) PATENT AND TRADEMARK OFFICE

CHEMICAL-ORGANIC PLANARIZATION PROCESS FOR
ATOMICALLY SMOOTH INTERFACES

INFORMATION DISCLOSURE

STATEMENT BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO.

0937.0014

SERIAL NO.

09 902 250

APPLICANT

Gerald T. Mearini and Laszlo Takacs

FILING DATE

July 10, 2001

GROUP

2874

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB- CLASS | FILING DATE IF APPROPRIATE |
|---------------------|-----------------|---------|---------------|-------|---------------|----------------------------------|
| | 5 7 4 8 3 5 0 | 5/5/98 | Pan et al | 359 | 130 | 6/19/96 |
| | 6 2 0 5 2 7 0 | 3/20/01 | Cao | 385 | 24 | 9/23/99 |
| | 6 2 3 3 2 6 1 | 5/15/01 | Mesh et al | 372 | 32 | 6/9/99 |
| | 5 5 2 9 6 7 1 | 6/25/96 | Debley et al. | 204 | 192.34 | 7/27/94 |
| | 5 7 2 5 4 1 3 | 3/10/98 | Malshe et al | 451 | 41 | 5/6/94 |
| | 4 7 4 7 9 2 2 | 5/31/88 | Sharp | 204 | 192.11 | 3/25/86 |

FOREIGN PATENT DOCUMENTS

| DOCUMENT NUMBER | DATE | COUNTRY | CLAS S | SUB- CLAS S | TRANSLATIO N YES NO |
|-----------------|------|---------|-----------|-------------------|---------------------------|
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | |
|--|---|
| | Kumar, et al.; <i>Near-Infrared Bandpass Filter from Si/SiO₂</i> ; Multilayer Coatings; February 1999 |
| | Suntola, T.; <i>Cost-Effective Processing by Atomic Layer Epitaxy</i> ; 1993 |
| | Bachman, et al.; <i>Molecular Layer Epitaxy by Real-Time Optical Process Monitoring</i> ; Department of Materials Science and Engineering, North Carolina State University, 1997. |
| | H., Kawai, T. Tabata; <i>Atomic Layer Control of the Growth of Oxide Superconductors Using Laser Molecular Beam Epitaxy</i> ; 1997. |
| | Spiller, E.; <i>Smoothing of Multilayer X-Ray Mirrors by Ion Polishing</i> ; IBM Research Division, Thomas J. Watson; 1993. |
| | Puik, E.J, van der Wiel and Zeijlemaker, H, and Verhoeven, J.; <i>Ion Etching of Thin W Layers: Enhancing Reflectivity of W-C Multilayer Coatings</i> ; March 30, 1989. |
| | Nishizawa, J., Abe, H., and Kurabayshi, T.J. 132(5) (1985). |
| | Puik, E.J., et al.; <i>Appln. Surf. Sci.</i> 47 (1991) 251. |
| | Kloidt, A, et al.; <i>Thin Sol Films</i> , 228 (1993) 154. |

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Imai, F., Kunimori, K., and Nozoye, H; *Novel Epitaxial Growth Mechanism of Magnesium Oxide/Titanium Oxide Ceramics Superlattice Thin Films Observed by Reflection High-Energy Electron Diffraction*; November 8, 1993.

Kildemo, et al.; *Real Time Control of the Growth of Silicon Alloy Multilayers by Multiwavelength Ellipsometry*; 1996.

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